

REMARKS

Claims 1-42 are pending in the present application. In the Office Action mailed September 6, 2005, the Examiner took the following action: (1) objected to the drawings; (2) objected to the specification due to informalities; (3) objected to claims 1 and 15 due to informalities; (4) rejected claims 13 and 26 under 35 U.S.C. 112, first paragraph, due to lack of enablement; (5) rejected claims 4, 8, 9, 11, 17, 21, 22, 24 and 28 under 35 U.S.C. 112, second paragraph, as being indefinite; (6) rejected claims 1-4, 8-11, 14-17, 21-24, 27-32, and 35-37 under 35 U.S.C. 102(b) as being anticipated by Balcombe (U.S. 4,031,931); (7) rejected claims 1, 4, 8, 9, 14, 17, 21, 22, 28, 30, 31, 32, 36 and 37 under 35 U.S.C. 102(b) as being anticipated by Oster (U.S. 4,468,159); and (8) rejected claims 1-5, 8-10, 14-18, 21-23, 28-33, and 36 under 35 U.S.C. 102(e) as being anticipated by Barclay (U.S. 6,612,792 B2).

The Examiner acknowledged, however, that claims 38-42 are allowable, and that claims 6, 7, 12, 19, 20, 25, and 34 would be allowable if rewritten to include the limitations of their respective base and intervening claims. Applicants wish to thank the Examiner for acknowledging the presence of allowable subject matter, and respectfully request reconsideration of the application in view of the foregoing amendments and the following remarks.

I. Objections to the Drawings

The Examiner objected to the drawings under 37 C.F.R. 1.83(a) on grounds that the drawings allegedly fail to show a limitation recited in the claims. More specifically, the Examiner asserts that the “first and second elongated flexible rails” recited in claims 13 and 26 must be shown in combination with the “biasing device” recited in claims 1 and 14. Applicants submit concurrently herewith Amended Formal Drawings, wherein Figure 9 has been amended to show a counterbalance assembly 130 (including a “biasing device”) like that shown in Figures 1-5 in combination with the carriage assembly 220, which in turn is coupled to the track

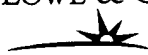
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assembly 210 having first and second rails 22, 24. Support for this drawing amendment may be found in the detailed description at page 14, lines 1-14, and in claims 13 and 26.

Applicants have also amended Figure 12 to correct an informality noted by the Examiner. Specifically, the reference numeral "500" has been changed to -- 300 -- in Figure 12, thereby properly indexing the repeated references to "manufacturing assembly 300" to Figure 12 throughout the detailed description from page 14 onward.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to the drawings.

II. Objections to the Specification

The Examiner objected to the specification due to informalities. Applicants have amended the specification to correct the informalities noted by the Examiner. Specifically, the following informalities have been corrected:

(1) on page 5, line 23, the character reference to "base member 126" has been amended to -- base member 122 --; and

(2) regarding the references to "manufacturing assembly 300" found repeatedly throughout the specification from page 14 on, Applicants submit amended Figure 12 concurrently herewith, wherein the reference numeral "500" has been changed to -- 300 --, thereby properly indexing the specification with Figures 12 and 13.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to the specification.

III. Objections to the Claims

The Examiner objected to claims 1 and 15 due to informalities. Applicants have amended claims 1 and 15 to correct the informalities noted by the Examiner. More specifically, Applicants have amended claim 1 to remove the comma after the term “workpiece” and have amended claim 15 to change the word “oa” to -- one --. Accordingly, Applicants respectfully request reconsideration and withdrawal of these objections.

IV. Rejections of claims under 35 U.S.C. §112, first paragraph.

The Examiner rejected claims 13 and 26 under 35 U.S.C. 112, first paragraph, on grounds of lack of enablement. Specifically, the Examiner notes that the further limitations of the base recited in claim 13 have not been shown in combination with the apparatus recited in claim 1, and that the further limitations of the base recited in claim 26 have not been shown in combination with the apparatus recited in claim 14.

As noted above, Applicants submit concurrently herewith Amended Formal Drawings, wherein Figure 9 has been amended to show a counterbalance assembly 130 (including a “biasing device”) as shown in Figures 1-5 in combination with the carriage assembly 220, which in turn is coupled to the track assembly 210 having first and second rails 22, 24. Support for this drawing amendment may be found in the detailed description at page 14, lines 1-14, and in claims 13 and 26. No new matter has been added.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to claims 13 and 16.

V. Rejections of claims under 35 U.S.C. §112, second paragraph.

The Examiner rejected claims 4, 8, 9, 11, 17, 21, 22, 24 and 28 under 35 U.S.C. 112, second paragraph, as being indefinite. Applicants have amended the claims to better point out and distinctly claim the subject matter which Applicants regard as their invention, as follows:

(1) in claims 4 and 17, the limitation “first and second directions” has been amended to recite -- a first direction along the translation axis, and in a second direction along the translation axis opposite to the first direction --;

(2) claims 8 and 21 have been amended to recite “wherein the biasing device is biasable along a biasing axis that is aligned with the translation axis” ;

(3) in claims 9 and 22, the limitation “the biasing axis” has been amended to recite -- a biasing axis --; and

(4) in claims 11 and 24, the limitation “translation direction” has been amended to recite -- translation axis --.

Regarding the Examiner’s second rejection of claim 17, Applicants respectfully submit that the term “the biasing axis” does not appear in claim 17. Similarly, Applicants have carefully reviewed claim 28, but do not find the limitation “the biasing axis” recited in this claim.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of claims 4, 8, 9, 11, 17, 21, 22, 24 and 28 under 35 U.S.C. 112, second paragraph.

VI. Allowable Subject Matter

Claims 1-5, 7-9, and 13

Applicants have amended claim 1 to include the limitations of claim 6, which the Examiner acknowledged as being allowable. Claim 1 is therefore allowable, as are claims 2-5, 7-9, and 13 depending therefrom. Accordingly, Applicants respectfully submit that claims 1-5, 7-9, and 13 are in condition for allowance.

Claims 11 and 12

Claim 12 has been amended to include the limitations of its base and intervening claims (claims 1 and 10), thereby putting claim 12 in condition for allowance. Claim 11 has been amended to depend from claim 12. Accordingly, claims 11 and 12 are now in condition for allowance.

Claims 14-18, 20-22, and 26-27

Claim 14 has been amended to include the limitations of claim 19, which the Examiner acknowledged as being allowable. Claim 14 is therefore allowable, as are claims 15-18, 20-22, and 26-27 depending therefrom. Accordingly, Applicants respectfully submit that claims 14-18, 20-22, and 26-27 are in condition for allowance.

Claims 28-33 and 35-37

Claim 28 has been amended to include the limitations of claim 34, which the Examiner acknowledged as being allowable. Claim 28 is therefore allowable, as are claims 29-33 and 35-37 depending from claim 28. Accordingly, claims 28-33 and 35-37 are now in condition for allowance.

Claims 38-42

The Examiner acknowledged that claims 38-42 are in condition for allowance.

VII. New Claims.

Claims 43-45

Claim 43 recites an apparatus for supporting a tool relative to a surface of a workpiece, the apparatus comprising a base adapted to be attached to the workpiece; a tool support coupled to the base and moveable along a translation axis relative to the workpiece; and a biasing device including *a pressurizable cylinder having a first portion rigidly coupled to the tool support and a second portion coupled to the base, the pressurizable cylinder being adapted to at least partially counterbalance a force exerted on the tool support along the translation axis.* (emphasis added).

Balcombe (U.S. 4,031,931)

Balcombe teaches a mortising machine having a tool support 20, and a pair of springs 22 that exerts a biasing force on the tool support 20 (1:60-63). There is no teaching or suggestion in Balcombe of a biasing device including *a pressurizable cylinder having a first portion rigidly coupled to the tool support and a second portion coupled to the base, the pressurizable cylinder being adapted to at least partially counterbalance a force exerted on the tool support along the translation axis* as recited in Applicants' claim 43.

Oster (U.S. 4,468,159)

Oster teaches a drill press and stand that includes a tool support 30 and a biasing spring 24 that counteracts the weight of the tool. (3:30-32). There is no teaching or suggestion in Oster of a biasing device including *a pressurizable cylinder having a first portion rigidly coupled to the tool support and a second portion coupled to the base, the pressurizable cylinder being adapted to at least partially counterbalance a force exerted on the tool support along the translation axis* as recited in Applicants' claim 43.

Barclay (U.S. 6,612,792 B2)

Barclay teaches a work table having a tool counterbalancing means. More specifically, the counterbalancing means taught by Barclay includes a pneumatic cylinder 100 coupled to a first end of a flexible line 90, as shown in Figure 1. The flexible line 90 is engaged over a pulley 80, and a second end of the flexible line 90 is coupled to a tool mount 60. Thus, the tool mount 60 hangs from the flexible line 90, and is moved upwardly and downwardly by the pneumatic cylinder 100. (5:17-34).

There is no teaching or suggestion in Barclay of a biasing device including *a pressurizable cylinder having a first portion rigidly coupled to the tool support and a second portion coupled to the base, the pressurizable cylinder being adapted to at least partially counterbalance a force exerted on the tool support along the translation axis* as recited in Applicants' claim 43. According to Barclay, a flexible line 90 is coupled between the tool mount 60 and the pneumatic cylinder 100.

For the foregoing reasons, claim 43 is allowable over the cited references. Claims 44-45 depend from claim 43 and are allowable over the prior art for the same reasons as claim 43 and also due to additional limitations recited in those claims.

Claims 46-47

Claim 46 recites a method of performing a manufacturing operation on a surface of a workpiece, the method comprising moveably supporting a manufacturing tool proximate a surface of the workpiece, the manufacturing tool being coupled to a tool support, the tool support moveable along a translation direction over the surface of the workpiece; and *providing a biasing force in a biasing direction using a pressurizable cylinder having a first portion rigidly coupled to the tool support, the biasing direction being substantially parallel to the translation direction.* (emphasis added).


As described more fully above, the cited references do not disclose, teach, or fairly suggest the method recited in claim 46. Claim 46, and claim 47 depending therefrom, are therefore allowable

CONCLUSION

For the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the pending objections and rejections, and allowance of claims 1-5, 7-9, 11-18, 20-22, 24-33, and 35-47. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to call the undersigned at his convenience.

Respectfully submitted,

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Enclosures: Amended Formal Drawings

MAIL CERTIFICATE

I hereby certify that this communication is being deposited with the United States Postal Service via first class mail under 37 C.F.R. § 1.08 on the date indicated below addressed to: **MAIL STOP AMENDMENTS**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

December 16, 2005
Date of Deposit

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